IN THE CLAIMS

Please amend the claims as follows:

Claims 1-3 (Canceled).

Claim 4 (Currently Amended): A QoS controller, in an IP network having one or more routers, the QoS controller being different from the one or more routers of the IP network and comprising:

a storing unit configured to assign a first bit area and a second bit area within a field in an IP header of an IP packet, and store first bits for implementing bandwidth control at said routers into said first bit area and second bits that indicate a path for routing the IP packet to a destination router into said second bit area, wherein said first bits and said second bits do not interfere with each other within the field in the IP header;

a reporting unit configured to report to said routers said first bits and said second bits stored by said storing unit;

a database unit, said database unit representing a first bit sequence as a router-control class for controlling said routers, and a second bit sequence as a routing class for routing at said routers, and said database unit storing, in accordance with a type of the IP packet, a relationship between said router-control class and said routing class;

~~The QoS controller as claimed in claim 3, further comprising:~~

a traffic-monitoring unit configured to monitor traffic conditions at said routers;

[[and]]

a corresponding-relationship updating unit configured to change the relationship, stored at said database unit, between said router-control class and said routing class, based on said monitored traffic conditions, wherein

said reporting unit reports to said routers the relationship, stored at said database unit, between said router-control class and said routing class, and

said reporting unit reports to said routers the relationship changed by said corresponding-relationship updating unit.

Claims 5-8 (Canceled).

Claim 9 (Currently Amended): A QoS controller, in an IP network having one or more routers, the QoS controller being different from the one or more routers of the IP network and comprising:

a storing unit configured to assign a first bit area and a second bit area within a field in an IP header of an IP packet, and store first bits for implementing bandwidth control at said routers into said first bit area and second bits that indicate a path for routing the IP packet to a destination router into said second bit area, wherein said first bits and said second bits do not interfere with each other within the field in the IP header;

a reporting unit configured to report to said routers said first bits and said second bits stored by said storing unit; and

a database unit, wherein

said database unit represents a first bit sequence as a router-control class for controlling said routers, and a second bit sequence as a routing class for routing at said routers, and stores, in accordance with a type of the IP packet, a relationship between said router-control class and said routing class,

said reporting unit reports to said routers the relationship, stored at said database unit, between said router-control class and said routing class, and

~~The QoS controller according to claim 3, wherein~~ said database unit stores a first relationship between said router-control class and said routing class for controlling a first one of said routers and stores a second relationship between said router-control class and said routing class for controlling a second one of said routers.

Claim 10 (Currently Amended): A method of controlling QoS in an IP network having one or more routers, comprising the steps of:

assigning, by a QoS controller that is different from the one or more routers of the IP network, within a field in an IP header of an IP packet, a first bit area and a second bit area, wherein said first bit area and said second bit area do not interfere with each other within the field in the IP header ;

storing first bits for implementing bandwidth control at said routers into said first bit area, and storing second bits that indicate a path for routing the IP packet to a destination router at said routers into said second bit area;

reporting to said routers said first bits and said second bits stored;

causing, according to said reporting, said routers to start controlling and routing at said routers based on said reported first bits and said reported second bits stored;

~~The method according to claim 5, further comprising:~~

storing, by the QoS controller, a first bit sequence as a router-control class for controlling said routers, and a second bit sequence as a routing class for routing at said routers in correspondence according to a type of the IP packet;

reporting, to said routers, the correspondence between said router-control class and said routing class;

monitoring traffic conditions at said routers;

updating the correspondence between said router-control class and said routing class based on said monitored traffic conditions; and

reporting, to said routers, the updated correspondence between said router-control class and said routing class.

Claim 11 (Canceled).